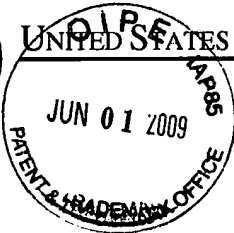




UNITED STATES PATENT AND TRADEMARK OFFICE

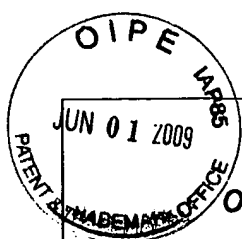


UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------|------------------|
| 10/734,601 | 12/12/2003 | Gill Pratt | 600A-001 | 1624 |
| 28731 7590 LEE WEINSTEIN 32A FAIRMONT STREET ARLINGTON, MA 02474 | | | EXAMINER NGUYEN, TU X | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2618 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 05/22/2009 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



Office Action Summary

Application No.

10/734,601

Applicant(s)

PRATT ET AL.

Examiner

TU X. NGUYEN

Art Unit

2618

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-21 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/12/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to claims 1 and 15 have been considered but are not persuasive.

The Examiner agrees that Burns teaches away from having signals from multiple repeaters arrive simultaneously at a receiver; however, the claim limitation "alignment in time of arrival" is not the same meaning of "arrive simultaneously at a receiver", with broadest interpretation in "alignment in time of arrival" is that the signals may arrival at the receiver at different times, supported by applicant specification paragraph 045, in an embodiment that the times are chosen so as to stagger the arrival time of the retransmitted signals. It is noted that the features upon which applicant relies (i.e., "simultanenously") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 7, are rejected under 35 U.S.C. 102(b) as being anticipated by Burns (US Patent 5129096).

Regarding claim 1, Burns discloses a method of routing a wireless signal between two points, said method comprising the steps of:

transmitting a wireless signal from an originating transmitter (col.3 lines 40-41);
receiving said wireless signal at a first set of repeating transceivers (col.3 lines 25-30);

in each said repeating transceiver, delaying said wireless signal by at least one predetermined delay and re- transmitting said wireless signal (col.1 lines 54-63);

such pre-determined delays in such transceivers being calculated to cause a desired alignment in time of arrival of such re-transmitted wireless signals at a destination receiver (col.1 lines 54-63, "the time delay associated with each repeater being unique to that repeater" reads on "alignment in time of arrival" with reasonable broadest interpretation); and

receiving said re-transmitted wireless signals at said destination receiver (abstract, receiver 12).

Regarding claim 7, Burns discloses predetermined delay is programmable (col.1 lines 64-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2618

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4 and 6, are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (US Patent 5129096) in view of Bassirat (US Patent 6507741).

Regarding claim 2, Burns fails to disclose the signal received at each said repeating transceiver is mixed to an intermediate frequency before said re-transmitting.

Bassirat discloses the signal received at each said repeating transceiver is mixed to an intermediate frequency before said re-transmitting (par.050). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Burns with the above teaching of Basirat in order to provide different frequency is used for the retransmission to increase the available bandwidth.

Regarding claim 4, Burns fails to disclose the signal received at each said repeating transceiver is processed through an FIR filter before said re-transmitting.

Bassirat discloses the signal received at each said repeating transceiver is processed through an FIR filter before said re-transmitting (par.051). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Burns with the above teaching of Basirat in order to remove the undesirable frequency product.

Regarding claim 6, Burns fails to disclose up-shifted in frequency before said re-transmitting.

Bassirat discloses up-shifted in frequency before said re-transmitting (par.039). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

Art Unit: 2618

invention was made to modify the system of Burns with the above teaching of Basirat in order to remove the undesirable frequency product.

Claims 3 and 5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (US Patent 5129096) in view of Marko et al. (US Patent 6347216).

Regarding claim 3, Burns fails to disclose the signal received at each said repeating transceiver is digitized before said re-transmitting.

Marko et al. disclose the signal received at each said repeating transceiver is digitized before said re-transmitting (fig.3, ADC). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Burns with the above teaching of Marko et al. in order to extract information.

Regarding claim 5, Burns fails to disclose the signal received at each said repeating transceiver is converted to an analog signal before said re-transmitting.

Marko et al. disclose the signal received at each said repeating transceiver is converted to an analog signal before said re-transmitting (fig.3, DAC). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Burns with the above teaching of Marko et al. in order to transmit analog signal.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bassirat (US Patent 6507741) in view of Burns (US Patent 5129096).

Regarding claim 15, bassirat discloses a transceiver for use in a system for dynamically routing wireless signals, said transceiver comprising: means for receiving a wireless signal; means for modulating said wireless signal, said modulating means coupled to said receiving means; means for digitizing said wireless signal, said digitizing means coupled to said modulating means; means for delaying transmission of said wireless signal by a dynamically adjustable delay dependent on the intended routing of such signal, said delaying means coupled to said digitizing means; means for amplifying said wireless signal, said amplifying means coupled to said delaying means; and means for transmitting said wireless signal, said transmitting means coupled to said amplifying means (fig. 3).

Bassirat fails to disclose a dynamically adjustable delay dependent on the intended routing signal.

Burns discloses a dynamically adjustable delay dependent on the intended routing signal (col.1 lines 54-65). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bassirat with the above teaching of Burns in order to provide receiver-transmission with alternate paths being provided to guard against the message being lost (as suggested by Burns, abstract).

Allowable Subject Matter

Claims 16-22 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 16, the prior art fails to teach "in said repeating transceiver, delaying each of said plurality of wireless signals by a separately predetermined delay to produce a set

of delayed wireless signals; combining said delayed wireless signals into a reconstituted wireless signal; and re-transmitting said reconstituted wireless signal", as cited in the claim.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tu X Nguyen/

Primary Examiner, Art Unit 2618

5/20/09